Griswold

AUTOMATIC CROSSING GATE

Bulletin No. 105

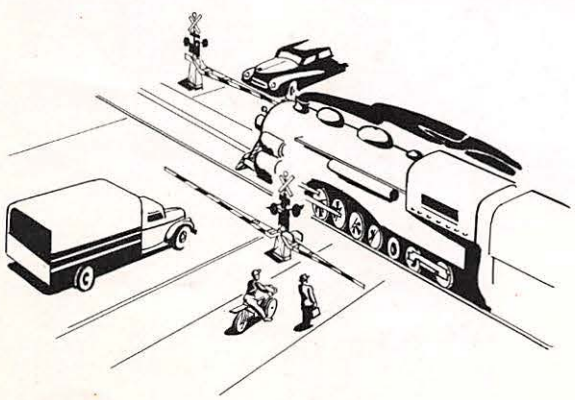
Modern...

as tomorrow's streamlined trains and automobiles...The Griswold Automatic Crossing Gate is scientifically engineered to meet TODAY'S highway-railway traffic problems with dependable unfailing operation . . . regardless of weather conditions . . . 24 hours a day!

The modern streamlined appearance of the Griswold Automatic Crossing Gate adds to the effectiveness of its warning. All operating mechanisms are located in the Pedestal leaving only the clear easy to understand message for the person approaching the crossing to see. Its modern design is based on over 25 years of experience in supplying protective equipment to the railroads of the nation. The Griswold Crossing Gate completely answers the problems of adverse weather conditions, increased highway travel, more trains and faster schedules AND the problem of the careless motorist.

DEPENDABLE OPERATION

SCIENTIFIC ENGINEERING PLUS QUALITY MATERIALS ASSURE RELIABLE AUTOMATIC PROTECTION — 24 HOURS A DAY



The Griswold Automatic Crossing Gate provides dependable operation year in and year out, regardless of weather or traffic conditions.

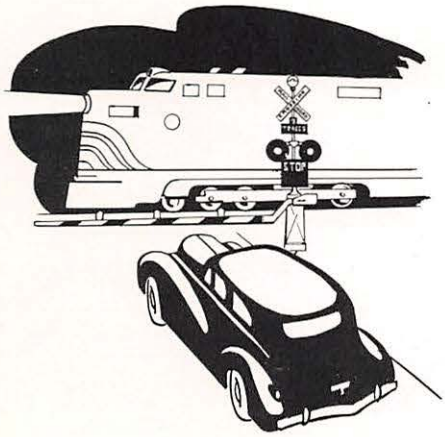
Scientific engineering, high grade workmanship and quality materials are combined with time tested operating features to provide the most dependable automatic gate in signal engineering history . . . features that provide years of trouble free service and the maximum in safety protection.

An outstanding feature of the Griswold Crossing Gate is the continuous use of power and gravity for descent. This provides more dependable operation under severe climatic conditions than the use of gravity alone. The motor is designed exclusively for the Griswold Crossing Gate . . . meets all AAR specifications . . and is practically indestructible.

* Power from 45-0 not desirable. Power would drive against motor vehicle.

FAST OPERATION

SCIENTIFICALLY ENGINEERED WITH CONTROLLED DESCENT IN STRICT ACCORD WITH AAR SPECIFICATIONS



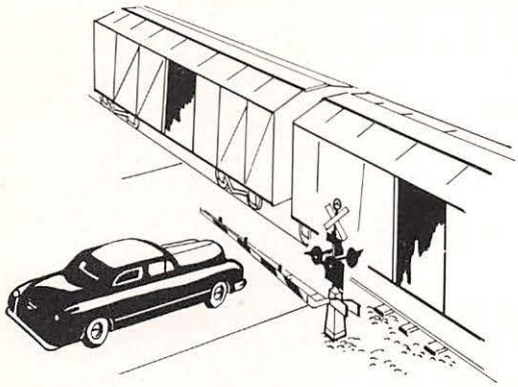
CONTROLLED DESCENT is pre-set at the factory to meet AAR specifications. Descent speed may be adjusted faster or slower if required to meet new operating conditions. When trains approach, the dependable streamlined Griswold Crossing Gate provides fast positive protection under all weather and operating conditions and often permits greater train speeds over crossings.

SPEEDY ASCENT moves traffic more quickly after trains pass. The Griswold Crossing Gate can be raised in as little time as 3½ seconds if desired. This is most valuable in heavy traffic and during rush hours.

INSTANT REVERSE eliminates the possibility of second train accidents. When conditions demand, the Griswold Crossing Gate arm reverses its direction instantly whether on descent or ascent.

LOW COST OPERATION

TIME-TESTED OPERATING FEATURES ASSURE YEARS OF TROUBLE-FREE SERVICE



LIFETIME CONSTRUCTION of the Griswold Crossing Gate provides highway-railroad protection unmatched in cost or safety. Every part is carefully designed for long trouble free service. No servicing is required for the motor and mechanism bearings. They are double shield lubri-seal bearings with a special grease that will not change consistency with extremes of temperatures. Rugged, ventilated, weather-tight construction eliminates the hazard of frosting or condensation in the contacts and retards corrosion. All operating mechanisms are easily accessible for rapid inspection.

LOW CURRENT CONSUMPTION is provided by the specially designed motor which supplies plenty of extra power and is the most economical to operate. The Hold Clear uses very little current to keep in locking position.

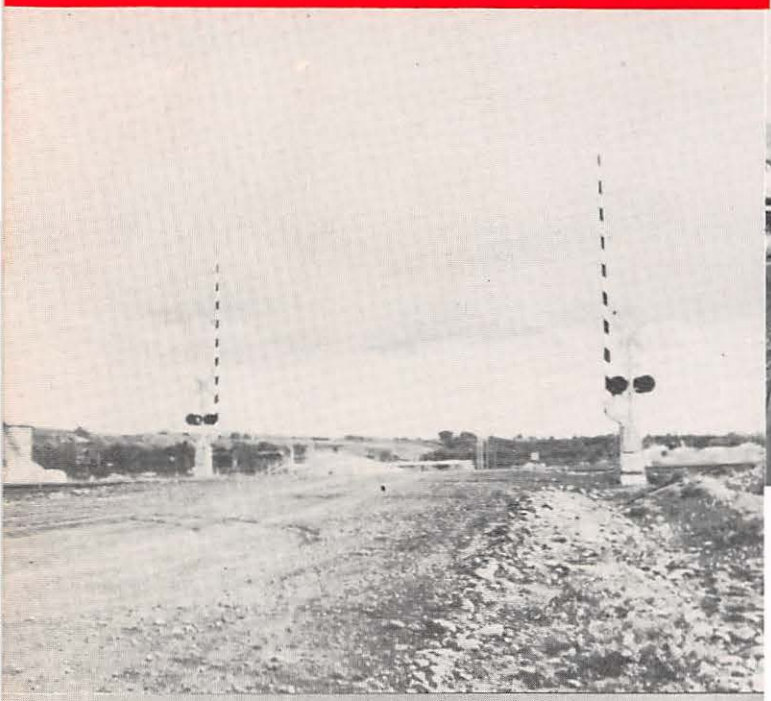
EASY INSTALLATION

FACTORY ASSEMBLED TO SAVE TIME IN INSTALLATION

The Griswold Crossing Gate, with its easy accessibility, simplicity in design and economical operation, is shipped assembled with the exception of arms and mast. This is your assurance that all parts are properly fitted, adjusted and in good working order. All inside wiring is assembled, pre-tested and in perfect operating condition at delivery. Specially designed precast foundations are available for even faster installation.

Right: Griswold Crossing Gates at Maywood, Ill., a Chicago suburb, on the main line of the Soo Line.

Below: A Northern Pacific Railroad main line crossing, protected by a Griswold Crossing Gate at Billings, Mont.



Typical GRISWOLD AUTOMATIC CROSSING GATE *Installations*

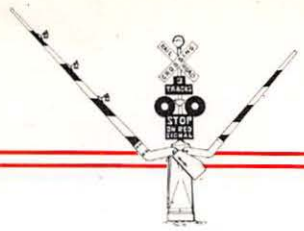
Above: Cedar Rapids and Iowa City crossing protected by a Griswold Crossing Gate. Photo shows a heavily traveled arterial highway near Cedar Rapids, Iowa.

Right: Griswold Crossing Gates in downtown Milwaukee, Wis. on the Chicago, Milwaukee, St. Paul and Pacific Railroad. Photo shows the Hiawatha enroute to Chicago. There are approximately 200 train movements a day at this crossing.

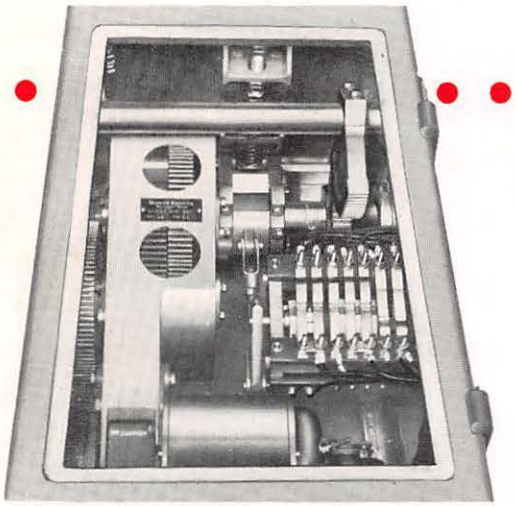
Left: In an industrial section of Cedar Rapids, Iowa, Griswold Crossing Gates protect a main line crossing between Chicago and Omaha on the Chicago North Western Railroad.

Right: Five track crossing protection at Staples, Minnesota. Photo shows the Northern Pacific crack train, the North Coast Limited.

Above: A Griswold Crossing Gate installation protects a high speed rural crossing north of Des Plaines, Ill., on the main line of the Wisconsin Central.



Principal



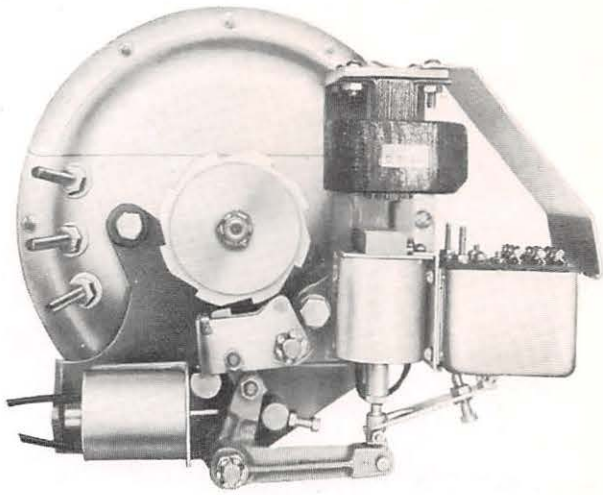
OPERATING MECHANISM

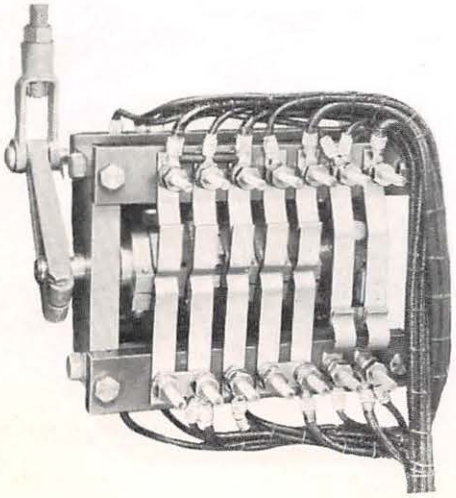
The smooth dependable performance of the Operating Mechanism in the Griswold Crossing Gate is the result of scientific engineering, quality materials and expert workmanship. Each part is specially designed to do its specific function perfectly. The large over size 12 volt D. C. Motor is designed specifically for the Griswold Crossing Gate and is practically indestructible. The motor will not burn out if the gate arm operation is obstructed regardless of the time involved. On descent, the motor generates current used for snubbing after the power is turned off. Rugged heavy duty gears are mounted in a durable alloy cast gear housing. No servicing of the Operating Mechanism is required as all moving parts are mounted in double shield lubri-seal bearings which are filled with a special grease that will not change consistency with extremes of temperature.

The Operating Mechanism is made completely automatic by means of track circuits or may be manually operated by remote control.

HOLD CLEAR

The Hold Clear is skillfully engineered and manufactured to close tolerances. It is thoroughly dependable and safe. The design is very simple. All necessary adjustments are made at the factory before delivery and no further attention is required. Power unlatching assures positive ratchet release at all times. Should power fail, the Hold Clear will automatically release by gravity. The Hold Clear is held in locking position by a 500 ohm coil using 24 ma. at 12 volts and will hold 3000 foot pounds on the gate arm shaft.

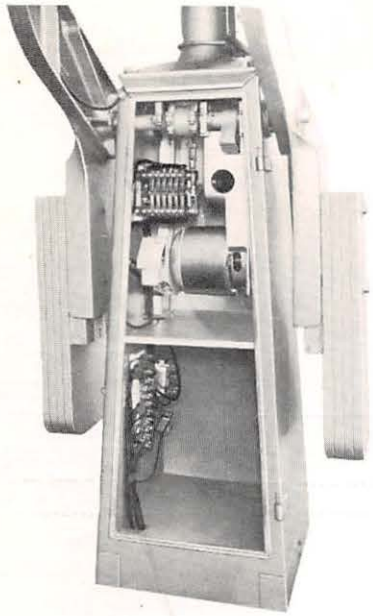




CIRCUIT CONTROLLER

The Circuit Controller is mounted separately in the pedestal and run directly from the gate arm shaft. It has 14 silver alloy contacts with wiping action to assure positive contact. Circuit Controller is easily reached for adding new circuits and for easy inspection.

Features



GATE PEDESTAL

The Gate Pedestal which houses the operating mechanism, motor, circuit controller, and terminal board, is an attractive reinforced, ventilated steel housing. Durably constructed, the pedestal stands 5′ high and is 22½″ at the base. Large weatherproof steel doors give ample access to all interior parts. Anchor bolts are on 19″ centers and are accessible from outside of case. A steel cover designed to follow the contours of the pedestal protect the anchor bolts from the weather.

Bearing holes are provided for Sidewalk Arm Bearings on all cases so that Sidewalk Arms may be added easily at any future date. Terminal boards are located in the bottom portion of the pedestal. Note ample space available to add other equipment if required.

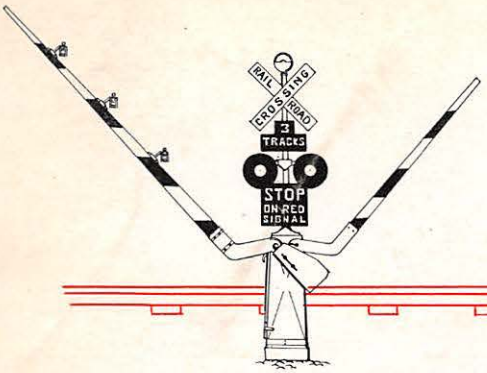
GATE ARMS

Gate Arms are constructed from specially selected kiln dried redwood lumber to provide the maximum safety at the crossing and to the Operating Mechanism. Gate Arms are available up to 40′ long. Gate Arms with Markings, Arm Lamps, Flashing Lights, and Signs, are arranged to conform with AAR specifications. The Gate Arm Shaft is 2″ in diameter and is constructed of special alloy steel, heat treated for maximum strength, and is set in large double shielded ball bearings. The gate Arm Supports are large durable castings and are provided with easily adjusted counter weights. The Spring Buffer is mounted separately in the Pedestal and is easily adjusted for up and down tension. Once set, it needs no further attention.

SIDEWALK GATE

The Griswold Automatic Crossing Gate can be furnished with both highway and sidewalk arms, or with highway arms only. Bearing holes are bored for the Sidewalk Arm Bearings on all Pedestals and covered so that a Sidewalk Arm may be easily added at any future date by providing necessary parts.

The same dependable operation is experienced in the Sidewalk Gate as in the Crossing Gate. The Griswold Automatic Sidewalk Gate uses the same mechanism, Motor, Hold Clear, Circuit Controller and Buffer as the Crossing Gate and provides complete protection for school children afoot or on bicycles, and pedestrians alike. The Pedestal and Sidewalk Arm Supports are of welded steel. A large terminal board is conveniently mounted in the Pedestal for easy connection.



SPECIFICATIONS

GATE ARMS: Highway crossing gate arms up to 40′ long.

Sidewalk crossing gate arms up to required length.

GATE ARM SHAFT: 2″ diameter.

Heat treated alloy steel . . . large double shield ball bearings.

GATE ARM SUPPORTS: Durable castings... adjustable counter weights.

OPERATING MECHANISM: Heavy duty gears mounted in rugged cast alloy frame.

Large double shield lubri-seal bearings.

MOTOR: 12 volts D. C.

Extra power . . . double shield lubri-seal bearings.

HOLD CLEAR: Will hold 3000 foot pounds on Gate Arm Shaft.

CIRCUIT CONTROLLER: 14 silver contacts.

TERMINAL BOARD: Equipped with terminals to take care of necessary circuits.

PEDESTAL: 5′ high, 22½″ square at base Reinforced steel, ventilated . . . anchor bolt holes on 19″ centers.

MAST: 4″ steel pipe of ample length to accommodate all sizes of flashing lights

FLASHING LIGHTS: AAR specifications

SIGNS: AAR specifications.

The Griswold Automatic Crossing Gate is designed from the ground up as a crossing gate. Each part has been skillfully engineered for the crossing gate exclusively . . . these parts are not converted from any other product and are not used in any other protective signal device. Each part is designed to perform one function *AND ONE FUNCTION ONLY* . . . to provide absolute safety protection at railway-highway crossings.

The Griswold Automatic Crossing Gate is simple in design, economical in operation and provides long trouble-free service. It is a grade crossing protective device composed of a pedestal containing the operating mechanism, circuit controller, terminal board and gate arm shafts holding the gate arm supports, gate arms, mast with flashing lights, bell, crossing sign, track sign, and a stop on red signal sign. Sidewalk arms are optional.

OTHER GRISWOLD PRODUCTS

Flashing Lights with
Rotating Banner Signal
Flashing Light Signal
Instrument Cases
Tower Cases
Precast Foundations
Battery Boxes
Control Panels
Warning Bells
Switch Boxes and Switches
Terminal Boxes

Dependable Railway Equipment for 25 years

Installation plans and quotations gladly furnished upon request.

GRISWOLD SIGNAL CO.

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